

|                            |                            |                                |                                 |
|----------------------------|----------------------------|--------------------------------|---------------------------------|
| <a href="#">Physics</a>    | <a href="#">Astronomy</a>  | <a href="#">Earth Sciences</a> | <a href="#">Chemistry</a>       |
| <a href="#">Technology</a> | <a href="#">Psychology</a> | <a href="#">Economy</a>        | <a href="#">Miscellaneous</a>   |
| <a href="#">Biology</a>    | <a href="#">Medicine</a>   | <a href="#">Story</a>          | <a href="#">Social Sciences</a> |

---

## Nuclear Weapons Museum

Until recently, what these top specialists were working on was a top state secret, not only for mere mortals but also for the nuclear weapons developers themselves. Now, these "products" can not only be seen but also touched...



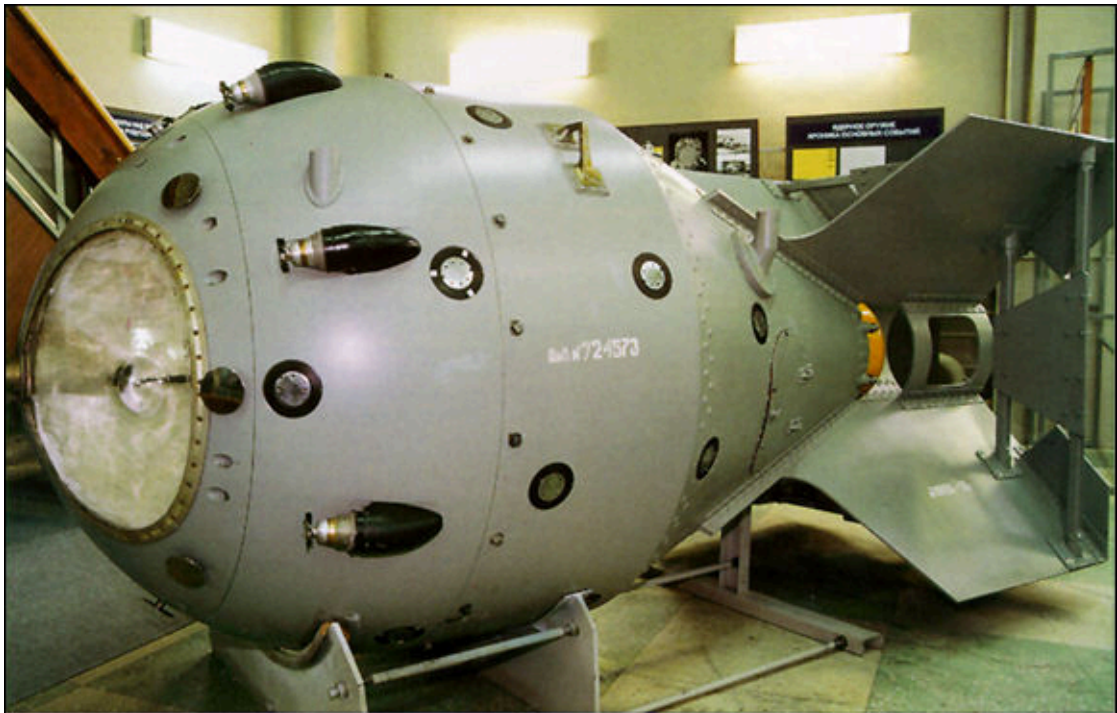
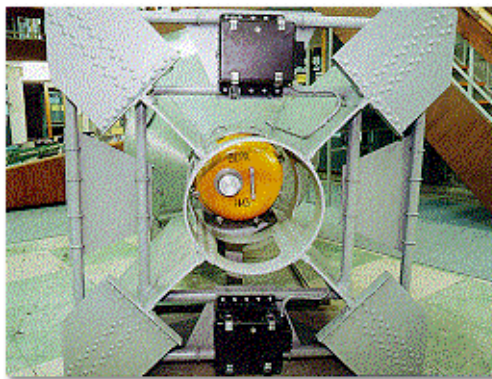
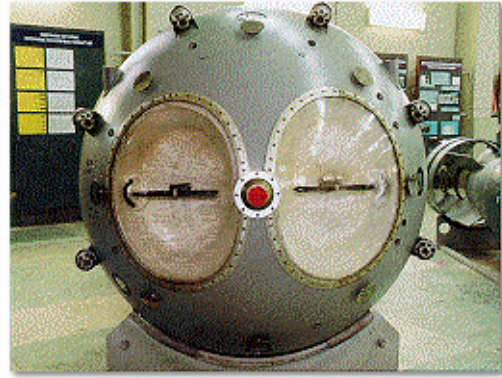
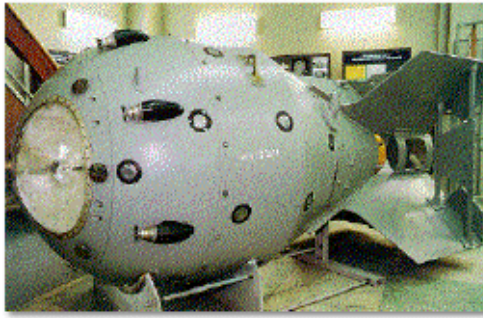
### RFNC-VNIIEF

- [The first atomic bomb of the USSR – RDS-1](#)
- [The first tactical serial atomic bomb - "RDS-4"](#)
- [The world's first hydrogen bomb, the RDS-6s](#)
- [The first nuclear warhead for a tactical missile](#)
- [Thermonuclear warhead for the first intercontinental ballistic missile](#)
- [The first nuclear warhead for a medium-range ballistic missile](#)
- [The first thermonuclear warhead for an intercontinental ballistic missile](#)
- [The world's most powerful experimental bomb, the A602EN](#)
- [A thermonuclear warhead for a tactical missile decommissioned under the INF Treaty.](#)
- [A facility for testing nuclear charges in boreholes with a diameter of 920 mm at depths of up to 1000 m](#)
- [A facility for testing nuclear charges in boreholes with a diameter of 720 mm at depths of up to 550 m](#)
- [Artillery nuclear shells](#)

### RFNC-VNIITF

- [Industrial nuclear charges](#)
  - [Thermonuclear aerial bomb](#)
  - [Nuclear bomb for use from supersonic aircraft](#)
  - [Separable single-block warhead of a ballistic missile](#)
  - [The warhead of an intercontinental ballistic missile](#)
  - [Warhead of an anti-aircraft missile](#)
  - [Hydrogen bomb for strategic aviation](#)
  - [Operational-tactical missile](#)
  - [Warhead of a tactical missile](#)
  - [Separable single-block warhead of a ballistic missile](#)
  - [A single-block warhead with a passive homing system and ballistic correction of the flight trajectory](#)
  - [The single-warhead of the first submarine-launched intercontinental ballistic missile](#)
  - [A lightweight, single-block warhead with a compact, powerful charge](#)
  - [Warhead for the first multiple warhead of a sea-launched ballistic missile](#)
  - [Monoblock warhead](#)
  - [The first warhead of a multiple warhead with individual targeting points](#)
  - [Capsules with keys](#)
-

## The first atomic bomb of the USSR – RDS-1

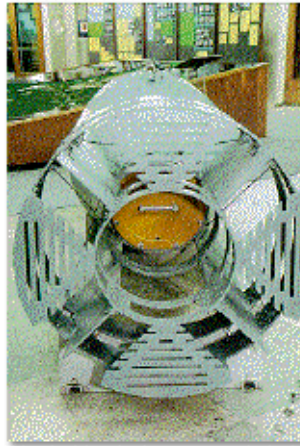
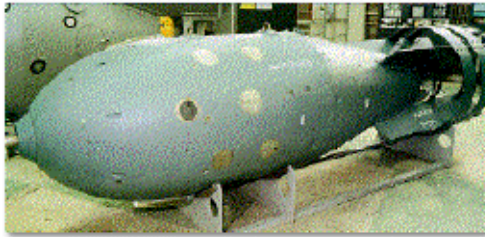


*The first nuclear charge was tested on August 29, 1949, at the Semipalatinsk test site. The charge yield was up to 20 kilotons of TNT equivalent.  
RFNC-VNIIEF Museum, Sarov.*

---

## The first tactical serial atomic bomb - "RDS-4"

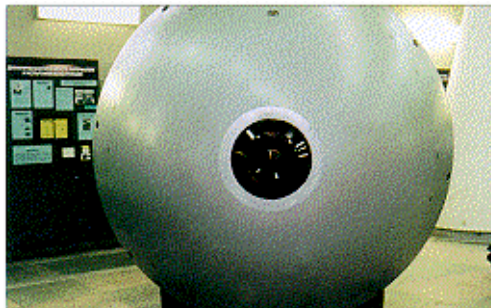


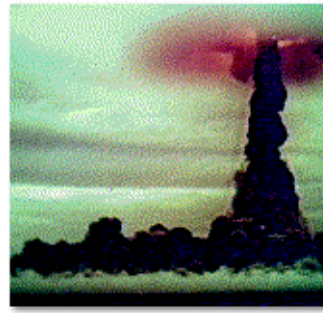
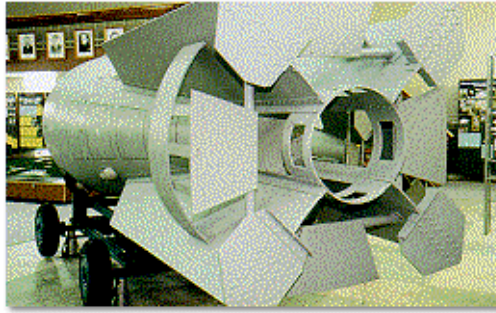


*Tested in 1953 at the Semipalatinsk test site. The yield of the charge was up to 30 kilotons of TNT equivalent. In service from 1954 to 1956.  
RFNC-VNIIEF Museum, Sarov.*

---

## **The world's first hydrogen bomb, the RDS-6s**



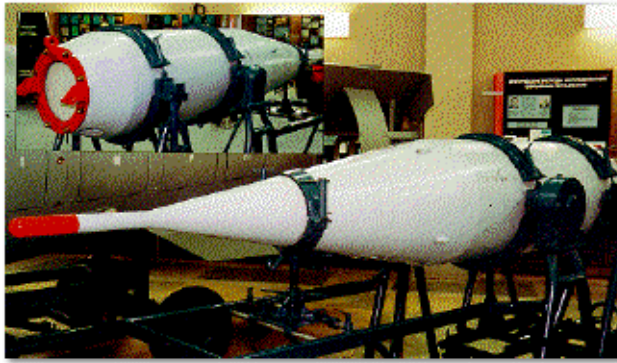


*The charge was tested on August 12, 1953, at the Semipalatinsk test site. The charge yield was up to 400 kilotons of TNT equivalent.  
RFNC-VNIIEF Museum, Sarov.*

---

## **The first nuclear warhead for a tactical missile**



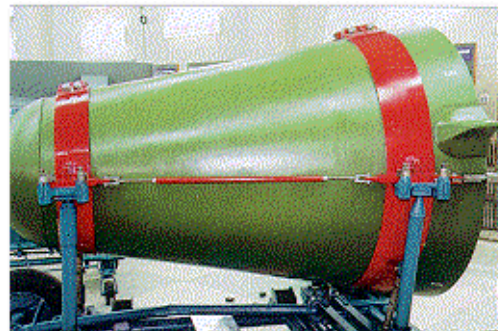
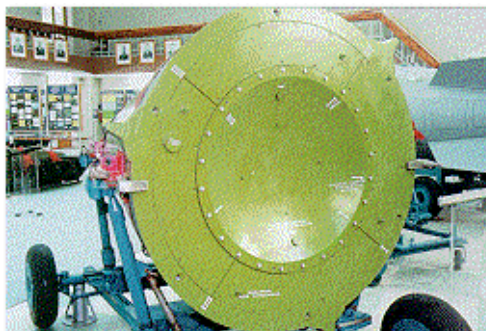


*The yield of the charge is up to 10 kilotons of TNT equivalent. Flight range is up to 32 km. In service from 1960 to 1967.*

*RFNC-VNIIEF Museum, Sarov.*

---

### **Thermonuclear warhead for the first intercontinental ballistic missile**





*The yield of the charge is over 2 megatons of TNT equivalent. Flight range up to 12,000 km.  
In service from 1970 to 1979.  
RFNC-VNIIEF Museum, Sarov.*

---

### **The first nuclear warhead for a medium-range ballistic missile**



*The yield of the charge is up to 40 kilotons of TNT equivalent. Flight range is up to 1200 km. In service until 1960.  
RFNC-VNIIEF Museum, Sarov.*

---

### **The first thermonuclear warhead for an intercontinental ballistic missile**

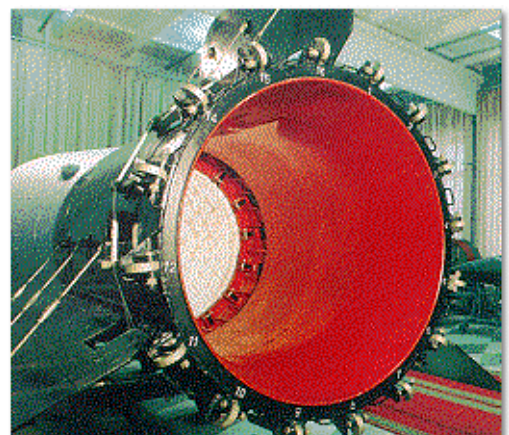




*Charge yield up to 3 megatons of TNT equivalent. Flight range up to 8,500 km. In service from 1960 to 1966.  
RFNC-VNIIEF Museum, Sarov.*

---

## **The world's most powerful experimental bomb, the A602EN**





*Tested on October 30, 1961, at the Novaya Zemlya test site. Estimated yield over 100 megatons of T. equivalent. Tested at half yield.  
RFNC-VNIIEF Museum, Sarov.*

---

**A thermonuclear warhead for a tactical missile decommissioned under the INF Treaty.**





*The yield of the charge is up to 200 kilotons of TNT equivalent. Flight range is up to 450 km. In service from 1981 to 1991.*

*RFNC-VNIIEF Museum, Sarov.*

---

**A facility for testing nuclear charges in boreholes with a diameter of 920 mm at depths of up to 1000 m**



*Diameter 830 mm. Length 2993 mm. Weight 1130 kg. The first test in 1984.*

*Museum of the RFNC-VNIIEF, Sarov.*

---

**A facility for testing nuclear charges in boreholes with a diameter of 720 mm at depths of up to 550 m**



*Diameter 600 mm. Length 2010 mm.  
Weight 990 kg. The first test in 1975.  
Museum of the RFNC-VNIIEF, Sarov.*

---

## **Artillery nuclear shells**



*A model of the first nuclear  
projectile, the RDS-41 (11D)  
. Caliber: 452 mm, tested on  
March 16, 1956.  
RFNC-VNIIEF Museum,  
Sarov.*



*Academician B.V. Litvinov at a 152mm  
nuclear projectile.  
RFNC-VNIITF Museum, Snezhinsk.*





*The smallest nuclear munition is the 152-mm artillery shell. It can withstand the overload of an artillery round without damage or loss of performance. Developed using the same contours as the standard high-explosive fragmentation shell for a self-propelled gun.  
RFNC-VNIITF Museum, Snezhinsk.*

---

## Industrial nuclear charges



*In total, 14 types of nuclear explosive devices (NED) were developed for industrial use, of which 9 were approved and used 70 times for industrial purposes.*



### **Nuclear explosive device**

*Developed in the second half of the 1960s for underground explosions intended for industrial purposes, in particular for :*

- *elimination of emergency gas and oil*
- *creation of underground tanks for the storage of hazardous waste;*
- *creation of underground storage facilities for gaseous chemical products;*
- *intensification of development of oil*
- *seismic sounding and geophysical studies of the crust.*

*In 1968, it was successfully used to eliminate a gas gusher at the Pamuk field in Central Asia, RFNC-VNIITF Museum, Snezhinsk.*

---

## Thermonuclear aerial bomb.



*The bomb was designed for full-scale tests of high-yield nuclear charges (20-50 megatons) . It is a streamlined ballistic body with a tail. The diameter is 2 m , the length is 8 m , and the weight is 30 tons.*

*To ensure the possibility of transporting an aerial bomb of such a large caliber, a special modification was carried out on the Tu-95 aircraft , which made it possible to place the aerial bomb on it, partially buried inside the fuselage.*

*The bomb was dropped at subsonic speed. To ensure the safety of the carrier aircraft crew from the damaging effects of the bomb dropped by it, a parachute system was developed: two*

*pilot parachutes with an area of 0.52 and 5<sup>m2</sup> , four braking and*

*parachutes - 42 m<sup>2</sup> each, a main parachute*

*with an area of 1600<sup>m2</sup> . The G-forces did not exceed 5 units, and the descent rate was maintained at 20–25 m/s .*

*Recovery systems for the descent modules of guided space rockets were later developed based on this parachute system.*

*The bomb was tested at half yield on December 24, 1962, at the Novaya Zemlya test site.*

*RFNC-VNIITF Museum, Snezhinsk.*

---

## Nuclear bomb for use from supersonic aircraft





*The first atomic bomb to enter serial production and be adopted by frontline and long-range aviation.  
Length 3,365 mm, diameter 580 mm, weight 450 kg.  
Aerodynamic shape with a low drag coefficient. "Free-feather" tail unit. Bombing is permitted from altitudes of 500 to 30,000 m and at speeds up to 3,000 km/h , both in level flight and during complex maneuvers.  
Developed and adopted in the 1960s .  
RFNC-VNIITF Museum, Snezhinsk.*

---

## **Separable single-block warhead of a ballistic missile**



*The missile is launched from a submarine at a range of up to 1,500 km . This missile system is the first to implement an underwater missile launch from a depth of 40-50 m .*

*The missile contains a megaton-class thermonuclear charge.*

*Overall dimensions: length 2,300 mm , diameter 1,304 mm .*

*Weight 1,144 kg .*

*The missile was developed and tested in the early 1960s and accepted into service in 1963.*

*RFNC-VNIITF Museum, Snezhinsk.*

---

## **The warhead of an intercontinental ballistic missile**





*Length 1893 mm, midsection diameter 1300 mm , weight 736 kg . The charge is a megaton-class thermonuclear warhead. The casing has a multilayer structure, including a reinforced shell and thermal protection. The tip of the casing is made of a radio-transparent material. Development and testing were conducted in the 1960s. RFNC-VNIITF Museum, Snezhinsk.*

---

## **Warhead of an anti-aircraft missile**



*The anti-aircraft missile's warhead is developed in two versions: with a non-nuclear warhead and a nuclear warhead. The nuclear version is designed to engage multiple air targets. RFNC-VNIITF Museum, Snezhinsk.*

---

## **Hydrogen bomb for strategic aviation**



*The very first hydrogen bomb to enter mass production and be adopted by strategic aviation.  
Development completed in 1962.  
RFNC-VNIITF Museum, Snezhinsk.*

---

## **Operational-tactical missile**



*The SKAD, a ground-launched, solid-fueled operational-tactical missile, has two warheads: a conventional and a nuclear one. It is 11 meters long, 880 mm in diameter, and has a firing range of up to 370 km. Under the Intermediate-Range Nuclear Forces Treaty, all nuclear warheads on these missiles were removed from service and destroyed. A conventional variant is still in service with many countries.  
RFNC-VNIITF Museum, Snezhinsk.*

---

## **Warhead of a tactical missile**





*The missile is an integral part of the rocket. Its length is 2,870 mm , its midsection diameter is 880 mm , and its weight is 950 kg . It carries a nuclear warhead with a yield of several tens of kilotons. The hull's load-bearing shell is made of steel. The hull has heat shielding and thermal insulation, and the tip is made of a radio-transparent material. A modification with a non-nuclear warhead is known as "Scad." Development and testing were conducted in the early 1960s . RFNC-VNIITF Museum, Snezhinsk.*

---

### **Separable single-block warhead of a ballistic missile**



*The missile is launched from a submarine. The warhead's development allowed for a significant reduction in size compared to the previous version, and a reduction in weight of almost half to 650 kg. This resulted in improved performance characteristics for the new missile system. The missile was accepted into service in 1968. RFNC-VNIITF Museum, Snezhinsk.*

---

**A single-block warhead with a passive homing system and ballistic correction of the flight trajectory**



*It was designed to equip submarine-launched missiles against moving sea targets and coastal installations. The warhead was guided to the target using the target's radar emissions by firing the missile's second-stage propulsion system twice during the exoatmospheric portion of its trajectory. The missile weighs 690 kg .*

*It was in trial operation since 1975.  
RFNC-VNIITF Museum, Snezhinsk.*

---

**The single-warhead of the first submarine-launched intercontinental ballistic missile**



*The combination of intercontinental range and the high yield of a megaton-class thermonuclear warhead enabled the new missile system to achieve high efficiency. The system weighs 650 kg and*

*was accepted into service in 1974.  
RFNC-VNIITF Museum, Snezhinsk.*

---

**A lightweight, single-block warhead with a compact, powerful charge**



*It was designed to equip an improved, next-generation missile. Its layout, with minimal gaps between component parts and reduced dimensions of the automation system instruments, significantly improved the weight and dimensions of the missile. It weighs 406 kg. It was accepted into service in 1974. RFNC-VNIITF Museum, Snezhinsk.*

---

**Warhead for the first multiple warhead of a sea-launched ballistic missile**



*It was designed to equip an improved, next-generation missile. It utilized a compact thermonuclear warhead and minimally sized automation instruments. The tightly packed warhead components allowed for the creation of a lightweight, compact warhead that could accommodate three warheads on a single launch vehicle. The warhead weighs 170 kg.*



*The warhead was accepted into service in 1974. RFNC  
-VNIITF Museum, Snezhinsk.*

---

### **Monoblock warhead**



*It was intended for installation on a missile as part of a new missile system. The design incorporated the latest advances in weight and size reduction at the time of development.*

*The missile weighs 370 kg.*

*It was accepted into service in 1978.*

*RFNC-VNIITF Museum, Snezhinsk.*

---

### **The first warhead of a multiple warhead with individual targeting points**



*It was intended for installation on a missile as part of a new missile system.  
The warhead weighed 210 kg .  
The product was accepted into service in 1978.  
RFNC-VNIITF Museum, Snezhinsk.*

---

## **Capsules with keys**



*Capsules containing the original keys to the towers where the first atomic and thermonuclear charges were tested. These keys were donated to the museum by Georgy*

*Pavlovich Lominsky, a test participant and the  
last to leave the towers.  
RFNC-VNIITF Museum, Snezhinsk.*

---

Attitudes toward nuclear weapons have been and remain ambivalent. But time is a stern judge. It will put everything in its place. One thing is clear: the museum leaves no one indifferent.

„ **RFNC-VNIIEF** „  
**RFNC - VNIITF**

---

*Articles on similar topics:*

**Taming the Core. (chapters from the book)** I. A. Andryushin, A. K. Chernyshev, Yu. A. Yudin.

**White Archipelago. (chapters from the book)** Vladimir Gubarev.

**Nuclear Tests of the USSR (chapters from the book).**

**On the Creation of the First Domestic Atomic Bomb.** G. A. Goncharov, L. D. Ryabev.

**How the Atomic Problem Was Solved in Our Country.** M. G. Pervukhin.

**A Weapon That Has Exhausted Its Potential.** L. P. Feoktistov.

**Preparing the Test Site and Testing the Nuclear Bomb.** V. N. Mikhailov, E. A. Negin, G. A. Tsytkov.

**"RDS-1" — Chronicle of the First Test.** from the report of K. I. Shchelkin.

**Test Sites, Test Sites...** E. V. Vagin.

**Semipalatinsk Nuclear Test Site.** V. N. Mikhailov.

**Birth of a Test Site.** P. Vetlitsky.

**Creation of a test site on Novaya Zemlya.** E. A. Shitikov.

**Test site activities on the Novaya Zemlya archipelago.**

**Atomic bomb in a torpedo tube.** E. A. Shitikov.

**Ship tests at the Novaya Zemlya test site.** E. A. Shitikov .

**Live firing with nuclear explosions.** E. A. Shitikov.

**Nuclear test site on Novaya Zemlya.** V. N. Mikhailov.

**Memories of Novaya Zemlya.** G. G. Kudryavtsev .

**Twice on Novaya Zemlya.** V. M. Kiselev.

**Emergency situations.** E. M. Lomovtsev.

**Thirty days on the destroyer Ostorozhny off the coast of Novaya Zemlya.** Garnov V. V.

**The work of testers is never easy and safe.** G. A. Kaurov.

**Megaton "secret".** G. A. Kaurov.

**Test work on the Shumny glacier.** V. I. Lepsky.

**Underwater nuclear explosions.** B. D. Khristoforov.

**Super-Powerful Nuclear Explosions in the USA and the USSR.** V. B. Adamsky, Yu. N. Smirnov, Yu. A. Trutnev.

**50-Megaton Explosion over Novaya Zemlya.** V. B. Adamsky, Yu. N. Smirnov.

**Memories of Participants in the Development and Testing of the Superbomb.**

**Episodes from the Birth of the "Sloika".** V. I. Ritus.

**On the Creation of the Soviet Hydrogen (Thermonuclear) Bomb.** Yu. B. Khariton, V. B. Adamsky, Yu. N. Smirnov.

**The Main Events in the History of the Creation of the Hydrogen Bomb in the USSR and the USA.** G. A. Goncharov.

**On the History of the Creation of the Soviet Hydrogen Bomb.** G. A. Goncharov.

**Safety Zone.** Mikhail Vazhnov.

**Khariton's Lost World. Memories.** L. V. Altshuler.

Nuclear Weapons Museum.

**Four Plus Four.** Viktor Malkov.

**Thus They Began to Split the Core.** Vladimir Gubarev.

**Uranium-45.** I.S. Drovennikov, S.V. Romanov.

**A Top Secret Mission.** Boris Ioffe.

**The Main Facility of the State .** Vladimir Gubarev

**Over the Nuclear Abyss.** Vladimir Gubarev



[The Heat of Nuclear Fire . Vladimir Gubarev](#)  
[Academician Yuri Trutnev: "An Endless Front of Work." Vladimir Gubarev .](#)  
[From the Plow to the Nuclear Club. Vladimir Gubarev.](#)  
[Arkady Brish: "We Have No Right to Make a Mistake." Vladimir Gubarev.](#)  
[The Idea Has Not Exhausted Its Potential. A.A. Brish.](#)  
[The Atomic Energy Institute and Its Founding Fathers . I. Larin.](#)

[Nuclear Explosions in Orbit. Daniel DuPont.](#)  
[Plutonium: A Diversity of Approaches and Opinions. E.G. Kudryavtsev.](#)  
[A Debate in Brussels on the Fate of Plutonium . A. Zhomotte.](#)  
[Nuclear Explosive Technologies. A.B. Koldobsky.](#)  
[Was There a Bomb? Alexander Zaitsev](#)

---

[Physics](#) [Astronomy](#) [Earth Sciences](#) [Chemistry](#)  
[Biology](#) [Medicine](#) [History](#) [Social Sciences](#)  
[Technology](#) [Psychology](#) [Economics](#) [Miscellaneous](#)  
[Home](#)